Montana Board of Oil and Gas Conservation
Environmental Assessment

Operator: Whiting Oil and Gas Corporation
Well Name/Number: Johnson 21-6TFH
Location: NE NW Lot 3 Section 6 T29N R56E
County: Roosevelt **, MT; Field (or Wildcat)** W/C (Three Forks Horizontal)

Air Quality

(possible concerns)
Long drilling time: No, 30 to 40 days drilling time.
Unusually deep drilling (high horsepower rig): No, triple derrick drilling rig to drill a single lateral Three Forks Formation well test to 18,981'MD/9,630'TVD.
Possible H2S gas production: H2S gas production possibility is slight.
In/near Class I air quality area: No Class I air quality area nearby.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under rule 75-2-211.

Mitigation:
X Air quality permit (AQB review)
__ Gas plants/pipelines available for sour gas
__ Special equipment/procedures requirements
__ Other:_____

Comments: No special concerns – using triple derrick drilling rig to drill to 18,981'MD/9,630'TVD, Three Forks Formation single lateral horizontal well.

Water Quality

(possible concerns)
Salt/oil based mud: Yes, oil based invert drilling fluids will be used on the mainhole. The horizontal lateral will be drilled with brine water. The surface hole will be drilled with freshwater and freshwater drilling fluids.
High water table: No, no high water table anticipated.
Surface drainage leads to live water: No, nearest drainages are an unnamed ephemeral drainage to Johnson Lake, about 3/8 of a mile to the west and Sheep Creek, about 5/8 of a mile to the northeast and ¾ of a mile to the east from this location.
Water well contamination: None, closest water wells are about ½ of a mile to the southeast, about ½ of a mile to the northeast, about ½ of a mile to the west and about 5/8 of a mile to the northwest from this location. Depth of these domestic/stock water wells range from 10' to 175'.
Porous/permeable soils: No, sandy clay soils.
Class I stream drainage: No class I stream drainages in this area.

Mitigation:
X Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
__ Closed mud system
__ Off-site disposal of solids/liquids (in approved facility)
__ Other: _____

Comments: 2000' of surface casing cemented to surface adequate to protect freshwater zones and to cover the base of the Fox Hills Formation.

Soils/Vegetation/Land Use

(possible concerns)
Steam crossings: No, stream crossings anticipated.
High erosion potential: No, small cut, up to 6.0' and small fill, up to 7.3', required.
Loss of soil productivity: None, location to be restored after drilling well, if well is nonproductive. If productive unused portion of drillsite will be reclaimed.
Unusually large wellsite: No, a large wellsite 400'X440' location size required.
Damage to improvements: No surface use is a CRP/cultivated field.
Conflict with existing land use/values: Slight

Mitigation
__ Avoid improvements (topographic tolerance)
__ Exception location requested
_X_ Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X_ Reclaim unused part of wellsite if productive
__ Special construction methods to enhance reclamation
__ Other _____

Comments: Access to location will be over existing county road, unnamed section line road. A short access of 170' will be built off the section line road into location. Oil based invert drilling fluids will be recycled. Completion fluids will be hauled to a Class II Disposal. Drilling cuttings and mud solids will be fly ashed in the lined pit and buried with subsoil cover. No special concerns.

Health Hazards/Noise

(possible concerns)
Proximity to public facilities/residences: Nearest residences are about ½ of a mile to the southwest, about 5/8 of a mile to the northeast and about 1.25 miles to the southeast from the location. The town of Culbertson, Montana is about 11 miles to the south southwest and the town of Froid, Montana is about 2.25 miles to the north from this location.
Possibility of H2S: H2S potential is slight.
Size of rig/length of drilling time: Triple drilling rig/short 30 to 40 days drilling time.

Mitigation:
_X_ Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:_____

Comments: Adequate surface casing and operational BOP should mitigate any problems. No concerns.

Wildlife/recreation

(possible concerns)
Proximity to sensitive wildlife areas (DFWP identified): None close by.
Proximity to recreation sites: None close by.
Creation of new access to wildlife habitat: No, surface use is a CRP/cultivated field.
Conflict with game range/refuge management: None.

Threatened or endangered Species: __Species identified as threatened or endangered are the Pallid Sturgeon, Interior Lease Tern, Whooping Crane and Piping Plover. Candidate species is the Sprague's Pipit. MTFWP Natural Heritage Tracker website indicates one (1) species of concern. It is the Whooping Crane. . MTFWP Natural Heritage Tracker website indicates one (1) potential species of concern. It is the Hayden's Shrew.

Mitigation:

__ Avoidance (topographic tolerance/exception)

__ Other agency review (DFWP, federal agencies, DSL)

__ Screening/fencing of pits, drillsite

__ Other:_____

Comments: __ The surface ownership is private land and surface use is CRP/cultivated surface lands. There may be species of concern that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done, if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands.

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites __None identified._____

Mitigation

__ avoidance (topographic tolerance, location exception)

__ other agency review (SHPO, DSL, federal agencies)

__ Other:_____

Comments: _____On private cultivated surface lands. There may be possible historical/cultural/paleontological sites that maybe impacted by this wellsite. We ask the operator to consult with the surface owner as to his desires to preserve these sites or not, if they are found during construction of the wellsite. The Board of Oil & Gas has no jurisdiction over private surface lands.

Social/Economic

(possible concerns)

__ Substantial effect on tax base

__ Create demand for new governmental services

__ Population increase or relocation

Comments: _____No concerns.

Remarks or Special Concerns for this site

_18,981'MD/9,630'TVD Three Forks Formation horizontal well test. No concerns.

Summary: Evaluation of Impacts and Cumulative effects

No significant long term impacts expected, some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): Steven Sasaki
(title:) Chief Field Inspector
Date: January 14, 2012

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website
(Name and Agency)
Water wells in Roosevelt County
(subject discussed)
January 14, 2012
(date)

US Fish and Wildlife, Region 6 website
(Name and Agency)
ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Roosevelt County
(subject discussed)

January 14, 2012
(date)

Montana Natural Heritage Program Website (FWP)
(Name and Agency)
Heritage State Rank= S1, S2, S3, T29N R56E
(subject discussed)

January 14, 2012
(date)

If location was inspected before permit approval:
Inspection date: _____
Inspector: _____
Others present during inspection:_____